One example of calculation U-values is given below:-

Example:
To calculate the U-value for a 20 cm thick brick wall, with 1.0 cm thick cement plaster on both sides:

K1 = 81.8 (plaster), K2 = 69.7 (Brick), K3 = 81.8 (plaster) Kcal/ hr cm^2 per cm.
L1 = 1.0, L2 = 20.0, L3 = 1.0 cm, f1 = 8, fo = 19.42
R1 = L1/K1 = 1.0/81.8 = 0.0122
R2 = L2/K2 =20.0/69.7 = 0.2870
R3 = L3/K3 = 1.0/81.8 = 0.0122
Ri = 1/f1 = 1/8 = 0.1250
R0 = 1/fo = 1/19.42 = 0.0515
RT = 1/fo + 1/f1 + R1 + R2 + R3 = 0.4879
U = 1/RT = 1/ 0.4879 = 2.05 Kcal/hr cm^2.

Equalize the length of your columns on the last page. If you are using *Word*, proceed as follows: Insert/Break/Continuous.

6. Recommendations

From the data on thermal performance index & U-values presented in this paper can assess the relative performance of wall & roof sections. It will enable them to make proper choice of materials to obtain better indoor thermal conditions. These values refer to Hot-Dry climate. From the correction factors, the thermal performance rating can be calculated for other climatic zones.

By using these methods and materials the energy could be saved which will contribute to build a sustainable building. Properly selected material according to climatic zone will help in reducing the use of active means of cooling or heating.

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